https://nsgreg.nga.mil

Geospatial Intelligence Standards Working Group

GWG Overview

http://www.gwg.nga.mil

GWG
Inaugurated January 2005

Working as a Community:

- Participatory governance – ***the community forum*** for all standardization activities & functions related to GEOINT
- Bring ***subject matter experts*** together within the DoD and IC to fully address GEOINT standards matters
- Enhance our ability to ***manage and share GEOINT data*** among disparate groups

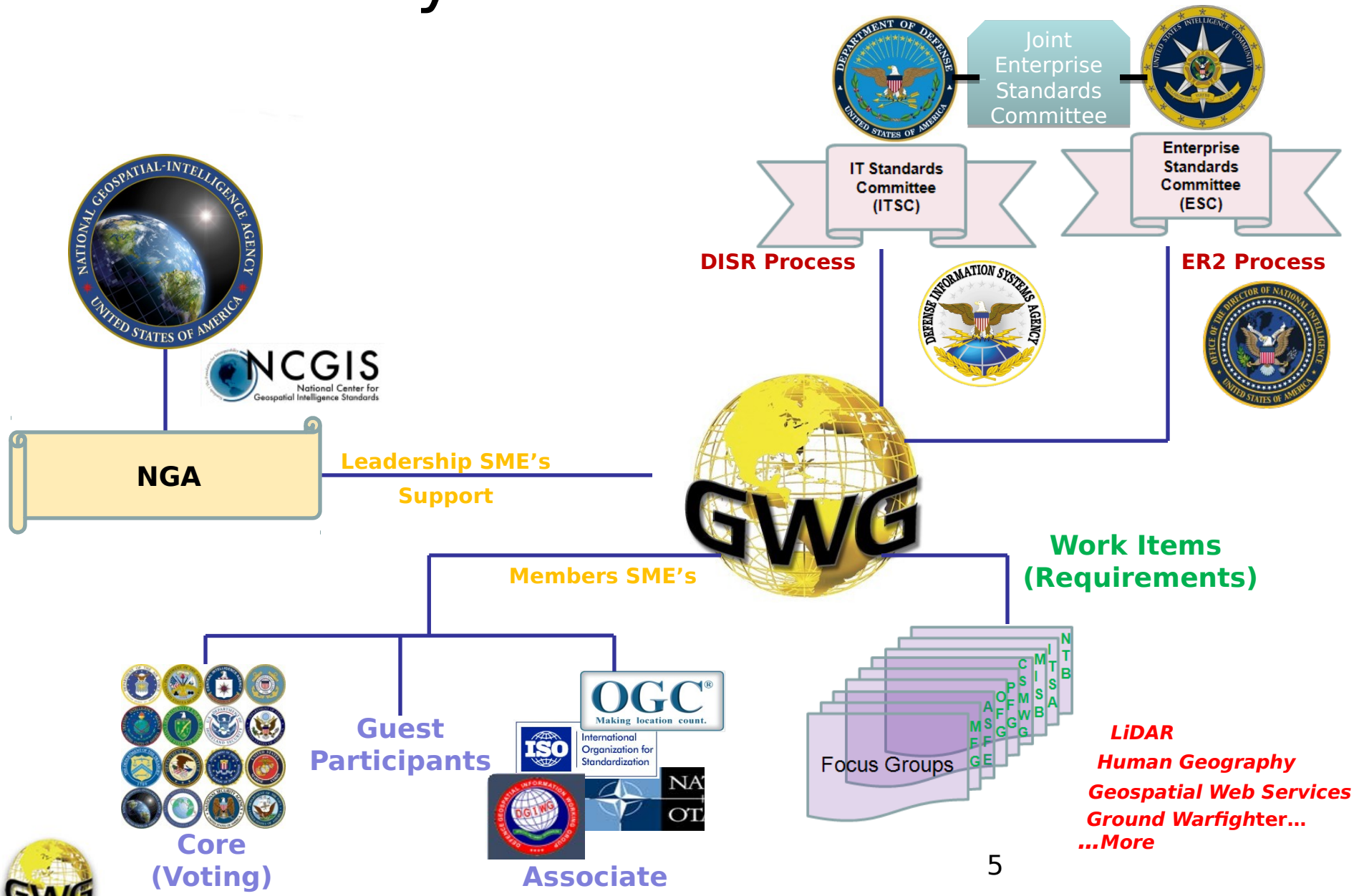
26 Core Members

- CIA
- NGA (NASB)
- NRO
- NSA
- Army
- Navy
- Air Force
- Marine Corps
- ODNI
- OSD (NII/AT&L)
- STRATCOM
- CENTCOM
- PACOM
- SOCOM
- Joint Staff, J6 *(formerly JFCOM)*
- Joint Staff, J2
- EUCOM
- NORTHCOM
- DHS
- DISA
- DIA
- DLA
- DARPA
- FGDC
- FBI
- DOE

Associate Members

- Australia, United Kingdom, Canada
- Defence Geospatial Information Working Group (DGIWG)
- International Committee for Information Technology Standards, Geographic Standards Subcommittee (INCITS/L1) [ANSI Accredited]
- International Organization for Standardization (ISO) / Chair, TC 211
- Open Geospatial Consortium (OGC)
- US Geospatial Intelligence Foundation (USGIF)
- NATO Joint Capability Group on Intelligence Surveillance & Reconnaissance (JCGISR)
- American Society for Photogrammetry & Remote Sensing (ASPRS)

Community Governance

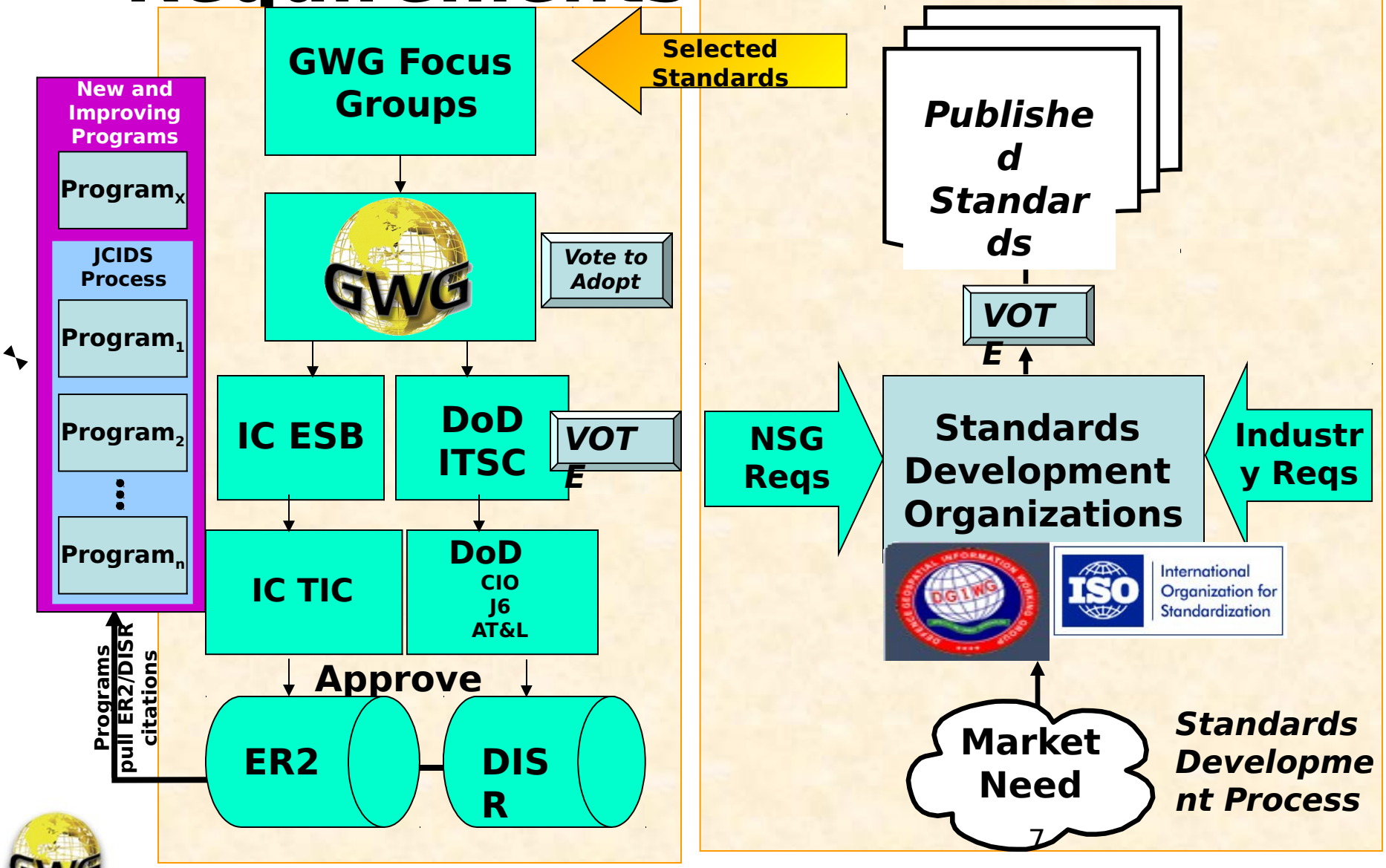


Three Levels of Activities

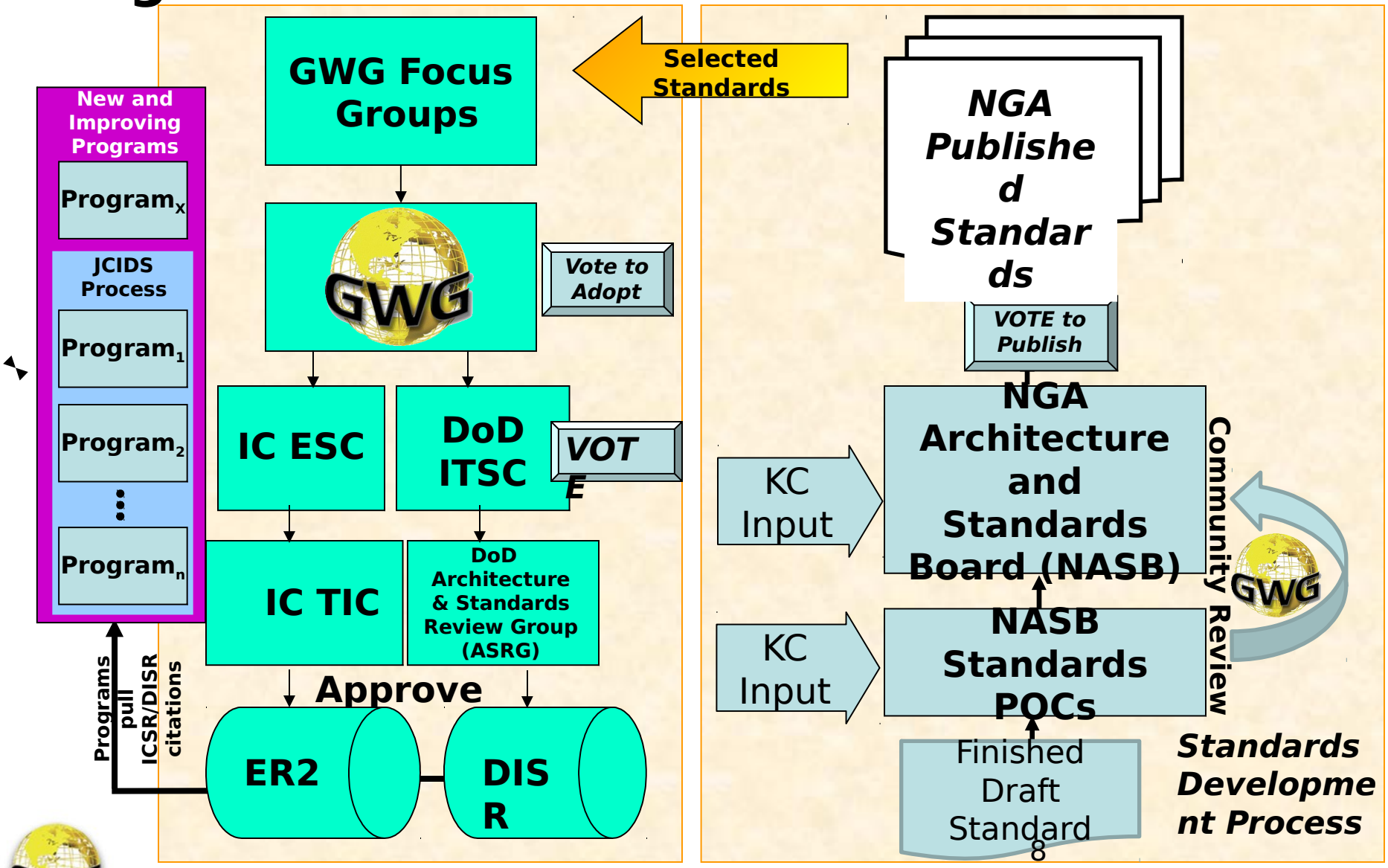
- **GWG Plenary Sessions**
  - Being reworked as an **Annual GEOINT Standards Seminar** to address users/PMs/implementers interests – expected ~Fall 2013
  - Networking, information sharing, educational forum

- **GWG Voting Meetings**
  - Three times each year – Next meeting is **end of August** for Baseline 13-3
  - Consensus for adopting GEOINT standards for citation in the DoD and IC Standards Registries (DISR/ER^2)
  - GEOINT standards adopted as emerging or mandated (acquisition binding for use in new systems and significant upgrades)
  - Voting by Only open to Core (U.S. federal agencies) Representatives
- **GWG Focus Groups**
  - SMEs meet as needed throughout the year
  - Many Focus Groups opt to meet in conjunction with the Plenary meetings

NSG Standards Requirements



NGA as a Standards Development Organization



Standards Lifecycle

Emerging

- Published
- Expected to be ***mandated within three years***
- Test, implementations, technical maturity
- May be implemented but not in lieu of mandated standard
- Use of (StdV-1) requires a waiver and a Technology Insertion Risk Assessment
- Generally placed in **StdV-*2* / *Standards Forecast***

Mandated

- Essential for interoperability across the enterprise
- ***Minimum Set*** of essential standards for the ***acquisition*** of all DoD systems that produce, use, or exchange info, and, when implemented, facilitates the flow of info in support of warfighter
- Required for the management, development, and acquisition of ***new or improved systems throughout*** the DoD

Retired

- New standards / technology now available and implemented
- Should ***not be used*** in a new or upgraded system
- Require waiver and Migration Plan
- ***Inactive***, remain in the DISR Registry

Information Guidance

- Are for cross-organization use and offer a means ***to further clarify standards*** and identify relevant policies and procedures
- Directives, Instructions, handbooks, manuals, procedures, best practices
- Have a status of either active (selectable for a standards profile) or inactive (not
- selectable).
- Do not meet the criteria to be approved as standard citations in the DISR, developed by processes outside the standards-development process

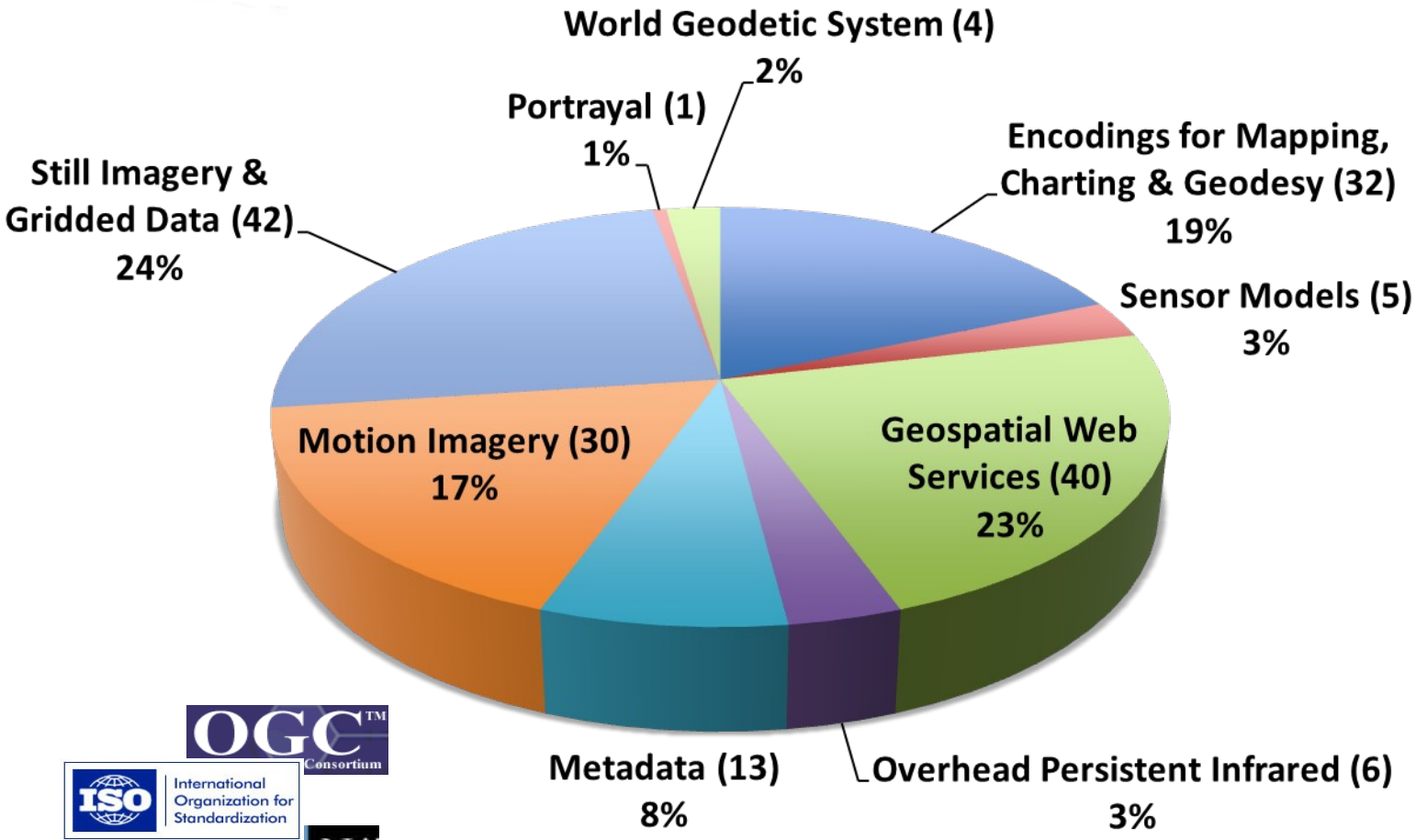
Sunset Tag

- ***Identifies a mandated standard for retirement*** as a tag not a status
- Tagged for retirement at a pre-defined event and date
- A replacement standard is frequently identified

IC-Prohibited

- An Intelligence Community Standards Registry (ICSR) prohibited standard shall not be used in IC systems. Such standards, which may be deemed appropriate for use in warfighter systems and environments, pose a high risk to IC systems if employed

GEOINT Standards Baseline 13-1 March '13



173 GEOINT Standards
Voluntary, Open, Consensus-Based

National Imagery Transmission Format Standard (NITFS) Technical Board (NTB)

- Still imagery & gridded data, formats, & compression
- Graphical, textual, & other means to annotate imagery products
- Imagery-related support data & metadata
- Imagery-derived data & metadata, to include foundation data
- LiDAR
- Image Quality

Motion Imagery Standards Board (MISB)

- Motion imagery, full motion imagery, & large volume streaming data
- Tasking, collection, posting, processing, storage, exploitation, discovery, retrieval, & exchange of motion imagery
- Associated metadata, audio & other related media types

Community Sensor Model Working Group (CSMWG)

- Sensor models for GEOINT services
- Production & application standards for interoperable sensor models
- Interoperable sensor models to enable the efficient collection, production & distribution of GEOINT source materials

Portrayal Focus Group (PFG)

- Portrayal standards for the visual depiction of physical features & geographically referenced activities
- Visual symbolization of GEOINT & symbol design, for both digital display & hardcopy media
- Rules & behaviors of GEOINT symbols necessary to ensure consistent rendering
- Interoperability in the exchange of portrayal information

Application Schemas for Feature Encoding Focus Group (ASFE)

- Data structures, exchange & storage of GEOINT
- Data format, feature & attribute coding schemes
- Exchange media, administrative procedures, representations of geographic feature geometry, feature attribution information, & other geographic information
- Development of the GEOINT Structure Implementation Profile
- Human Geography

Metadata Focus Group (MFG)

- Imagery, sensor & geospatial metadata

- Coordination of activities between various recognized standards development organizations & standardized metadata across respective communities

Geospatial Web Services Focus Group (GWS)

- Transferring GEOINT between environments - the movement of information from one system to another, that provide for posting, discovery, access, & analysis of GEOINT data stores & information stores in a distributed, real-time environment

- GEOINT services & GEOINT service architecture standards -technologies that enable service chaining interoperable service components

- Standards of interest to developers of services and service architecture components within a distributed, collaborative, geospatial environment, & by advanced designers of service algorithms, service chains, & service-to-service interfaces.

Overhead Persistent InfraRed (OPIR) Focus Group (OFG)

- OPIR remote sensing, data & metadata standards to foster net-centric data services

- OPIR data in a net-centric Service Oriented Architecture to improve support to operations & intelligence

World Geodetic System (WGS) and Geomatics Focus Group (WGSG)

- Global Positioning System (GPS) Precise Ephemeris information
- GPS Navigation message replacement standards
- Geodetic Survey Standards
- Geotechnical Standards
- Accuracy and positioning standards
- Geopositioning content and data

Standards Governance – DISR/IC Enterprise Standards Baseline

DoD IT Standards Registry (DISR) - NIPRNet

- A single, unifying DoD registry for approved standards citations and a registry for approved DoD IT standards profiles
- DISR Mandated Standards – the minimum set of essential standards for the acquisition of all DoD systems that produce, use or exchange information and, when implemented, facilitate the flow of information in support of the warfighter
- New/modified systems throughout the DoD are required to include all applicable DISR mandated standards in baseline (StdV-1 / Standards Profile)

ER²: IC Enterprise Standards Baseline & ICS-500-20: IC Enterprise Standards Compliance - JWICS

- Signed 12/16/10 500-20- Defines the IC framework for:
  - Adoption of IC enterprise standards best-suited for achieving the DNI's goals of interoperability and information sharing
  - Management of the IC Enterprise Standards Baseline in the IC Enterprise Registry and Repository ($ER^{2)}$ consisting of a minimal, focused, coordinated set of such standards
  - Compliance and compliance certification of those portions of IC systems and EA-related information technology items funded through the NIP

NSG Standards Registry

- The National System for Geospatial Intelligence (NSG) Standards Registry supports the discovery, traceability, and lifecycle management of GEOINT Standards that may be used in the development and operation of data- and net-centric GEOINT applications.
- The NSG Standards Registry is maintained by NGA for the GWG as a service to the NSG community.

Discovering GEOINT Standards in the NSG Standards Registry

- GEOINT Standards by Capability
  - A feature to help users find and identify GEOINT standards grouped functionally
- The registers are organized into four types of registries:
  - data schemas
  - data dictionaries
  - NSG-applicable standards
  - Geopolitical Entities Names and Codes (Country Codes)
  - Other registries will be added in the future, to include a registry of portrayals (symbols, rules, and rule sets).